

From: Dave Russell/ESC/R3/USEPA/US
Sent: 2/23/2012 4:21:46 PM
To: Cynthia Caporale/ESC/R3/USEPA/US@EPA
CC:
Subject: Re: HT for Micro

The holding time for a micro sample always depends on the analyte and the rule under which the samples are being collected.

The HT for total coliforms, fecals or E. coli is **30 hours** under the TCR (TC, FC, E.coli) and the GWR (E. coli), **8 hours** under the SWTR (TC,FC), and **6 hours** under NPDES (TC,FC,E.coli). When reviewing Dimock data for TC/FC I have applied the **30 hour** holding time, and thus far, all samples have met that holding time.

The HT for heterotrophic plate count is **8 hours** under the SWTR. HPC is only used as an indicator under the SWTR. The **8-hour** holding time for HPC is stated in the SDWA Lab Cert Manual and twice in Standard Methods. For Dimock data I have applied the **8 hour** HT, and although many samples have not met this HT, the result has always been to qualify the data as an estimate and as such it can still be used (with a flag/qualifier). No HPC results have been rejected based on holding time.

In Standard Methods, the **8-hour** HT is given at 9060 B(1)b : *"Do not exceed 8 h holding time for heterotrophic plate counts."*, [clear and emphatic] and a second time at 9215 A(4): *"The recommended maximum elapsed time between collection and analysis of samples is 8 h (maximum transit time 6 h, maximum processing time 2 h). When analysis cannot begin within 8 h, maintain sample at a temperature below 4C but do not freeze. Maximum elapsed time between collection and analysis must not exceed 24 h."*

The two papers on bacteriological holding time published by EPA microbiologists in Cincinnati indicate that the bacterial community in a sample can begin to change as soon as the sample is collected. Bacterial abundance may increase, decrease or remain the same. Those findings make the last resort 24-hour option offered by SM rather indefensible, and even if the 24-hour HT was applied to Dimock HPC data, the samples were not held below 4C following collection.

Hope this answers the question.